

Western Electric Co., Incorporated,
Equipment Engineering Branch, Hawthorne.

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Issue 2 BT-431741 (*)
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Replacing all previous
issues. (*)

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METHOD OF OPERATION

Line Circuit Arranged To Provide Night Service For P.B.X. Lines On Separate Final Multiple-Panel Machine Switching System.

DEVELOPMENT

1. PURPOSE OF CIRCUIT

- 1.1 This circuit is used to permit lines in groups to be selected both individually and by means of P.B.X. hunting. Two line numbers are assigned, one used at the regular final frame where P.B.X. hunting takes place and the other at a night final frame used as an individual line.

2. WORKING LIMITS.

- 2.1 None.

OPERATION

3. PRINCIPAL FUNCTIONS.

The principal functions of this circuit are as follows:

- 3.1 To allow an incoming call to come over either a regular final selector or a night final selector.
- 3.2 An incoming call over either final frame makes the other final terminal test busy.
- 3.3 An outgoing call makes both final terminals test busy.

4. CONNECTING CIRCUITS.

- 4.1 Any standard final selector circuit.
- 4.2 Subscriber's line circuits in full mechanical offices.

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DESCRIPTION OF OPERATION.

5. INCOMING CALL OVER REGULAR FINAL SELECTOR.

When a regular final selector seizes an idle P.B.X. trunk, battery is connected to the S-lead operating the (SL) relay through its 100 ohm winding. The (SL) relay operated, connects battery through 600 ohms over the S lead to the night final multiple frame thus making this trunk test busy to other selectors, and also closes a circuit from battery through 220 ohms over the S-lead to the line switch or line finder circuit, operating the cut-off relay thus preventing the P.B.X. from making outgoing calls.

6. INCOMING CALL OVER NIGHT FINAL SELECTOR.

When a night final selector seizes a P.B.X. trunk, battery is connected over the S lead operating the (SL-1) relay. The (SL-1) relay operated, connects battery through 220 ohms over the S-lead operating the cut-off relay in the individual line switch or line finder circuit, thus preventing the P.B.X. from making outgoing calls and also closes a circuit from battery through 2200 ohms to lead S₇ thus providing a P.B.X. hunting condition so that if this trunk should be selected at the ^(Regular) final frame, the selector will continue to hunt over the other P.B.X. trunks until it finds an idle terminal.

7. OUTGOING CALL.

When making an outgoing call, the (SL-2) relay operates and provides a busy condition at the night final multiple frame and a trunk hunting condition at the regular final multiple frame. The (SL-2) relay is fast operating so as to make the final terminals busy as quick as possible.

ENG. A.F.H.
10/9/25. ✓
E.T.

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